hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrheae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with $NaPO_4$ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO_4 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frp*A, *frp*C, *opc*, *por*A, a glutathione peroxidase encoding gene, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, or rotamase,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucousal space or systemic desimination.

66. (new) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 2 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrheae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with $NaPO_4$ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO_4 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frp*A, *frp*C, *opc*, *por*A, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucousal space or systemic desimination.

67. (new) The isolated DNA or complement of claim 66 wherein said Region 2 is a DNA which encodes an amino acid selected from the group consisting of SEQ ID NOs: 37-45.

68. (new) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 2 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrheae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with $NaPO_4$ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO_4 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frp*A, *frp*C, *opc*, *por*A, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase,

said DNA encoding a peptide localized beyond the cytoplasmic membrane.

69. (new) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 4 of Nm strain Z2491 and to a DNA sequence of MS11 and does not hybridize on a Southern blot to a DNA sequence

of *Neisseria lactamica* (Nl) strain Nl8064, under the following hybridization conditions: 16 h at 65°C, with $NaPO_4$ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO_4 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes, or the complement of said isolated DNA,

provided that said DNA or the complement of said isolated DNA is not *pil*C, a gene involved in the biosynthesis of any one of the polysaccharide capsule, IgA proteases, pilin, a protein which binds transferrin or lactoferin or an opacity protein,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucousal space or systemic desimination.

70. (new) The isolated DNA or complement of claim 69, said DNA sequence of Region 4 hybridizing with SEQ ID NO: 95.

71. (new) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 4 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrheae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with $NaPO_4$ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO_4 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frp*A, *frp*C, *opc*, *por*A, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase,

said DNA encoding a peptide localized beyond the cytoplasmic membrane.

72. (new) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 5 of Nm strain Z2491 and to a DNA sequence of MS11 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria lactamica* (Nl) strain N18064, under the following hybridization conditions: 16 h at 65°C, with $NaPO_4$ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO_4 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes, or the complement of said isolated DNA,

provided that said DNA or the complement of said isolated DNA is not *pil*C, a gene involved in the biosynthesis of any one of the polysaccharide capsule, IgA proteases, pilin, a protein which binds transferrin or lactoferin or an opacity protein,

said DNA being within an islet involved in the colonization of the nasopharynx or invasion of the submucousal space or systemic desimination.

73. (new) The isolated DNA or complement of claim 70 said DNA sequence of Region 5 hybridizing with a clone selected from the group consisting of B11, C29, C52, E34, C8, E2, B40, E59, E94, C47, E78, C45, E23 and E103.

74. (new) An isolated DNA which is *Neisseria meningitidis* (Nm) specific and hybridizes on a Southern blot to a DNA sequence of Region 5 of Nm strain Z2491 and does not hybridize on a Southern blot to a DNA sequence of *Neisseria gonorrheae* (Ng) strain MS11, under the following hybridization conditions: 16 h at 65°C, with $NaPO_4$ 0.5 M, pH 7.2; EDTA-Na 0.001 M, 1%, 1% bovine serum albumin and 7% sodium dodecylsulphate, followed by at least two washes in a solution comprising Na PO_4 40 mM pH 7.2/EDTA 1 mM/SDS 1%, the final wash being conducted at 65°C for 5 minutes,

provided that said DNA or the complement of said isolated DNA is not IS1106 (accession number Z11857), *frp*A, *frp*C, *opc*, *por*A, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase,

said DNA encoding a peptide localized beyond the cytoplasmic membrane.

75. (new) An isolated peptide encoded by a DNA sequence of claim 65.

76. (new) An isolated peptide encoded by a DNA sequence of claim 66.

77. (new) An isolated peptide encoded by a DNA sequence of claim 67.

78. (new) An isolated peptide encoded by a DNA sequence of claim 68.

79. (new) An isolated peptide encoded by a DNA sequence of claim 69.

80. (new) An isolated peptide encoded by a DNA sequence of claim 70.

81. (new) An isolated peptide encoded by a DNA sequence of claim 71.

82. (new) An isolated peptide encoded by a DNA sequence of claim 72.

83. (new) An isolated peptide encoded by a DNA sequence of claim 73.

84. (new) An isolated peptide encoded by a DNA sequence of claim 74.

85. (new) A composition comprising a DNA or complement of claim 65 and a carrier.

86. (new) A composition comprising a DNA or complement of claim 66 and a carrier.

87. (new) A composition comprising a DNA or complement of claim 67 and a carrier.

88. (new) A composition comprising a DNA or complement of claim 68 and a carrier.

89. (new) A composition comprising a the DNA or complement of claim 69 and a carrier.

90. (new) A composition comprising a DNA or complement of claim 70 and a carrier.

91. (new) A composition comprising a DNA or complement of claim 71 and a carrier.

92. (new) A composition comprising a DNA or complement of claim 72 and a carrier.

93. (new) A composition comprising a DNA or complement of claim 73 and a carrier.

94. (new) A composition comprising a DNA or complement of claim 74 and a carrier.

95. (new) A composition comprising a peptide of claim 75 and a carrier.

96. (new) A composition comprising a peptide of claim 76 and a carrier.

97. (new) A composition comprising a peptide of claim 77 and a carrier.

98. (new) A composition comprising a peptide of claim 78 and a carrier.

99. (new) A composition comprising a peptide of claim 79 and a carrier.

100. (new) A composition comprising a peptide of claim 80 and a carrier.

101. (new) A composition comprising a peptide of claim 81 and a carrier.

102. (new) A composition comprising a peptide of claim 82 and a carrier.

103. (new) A composition comprising a peptide of claim 83 and a carrier.

104. (new) A composition comprising a peptide of claim 84 and a carrier.

105. (new) An isolated peptide encoded by an *Neisseria meningitidis* (Nm) specific DNA sequence obtainable by a subtractive technique comprising

hybridizing a Nm DNA population and a subtractive *Neisseria* strain DNA population, under the following hybridization conditions: 48 h at 55°C, with 30 mM N-hydroxyethyl)piperazine-N'-(3-propanesulphonic acid), 3mM EDTA, pH 8.0 and 1.2mM

NaCl, wherein non- Nm specific DNA sequences in said Nm DNA population are subtracted from said Nm DNA population to produce an Nm specific subpopulation,

amplifying Nm specific DNA sequences in said Nm specific subpopulation, and

purifying said Nm specific DNA sequences,

provided that said DNA sequence is not IS1106 (accession number Z11857), *frp*A, *frp*C, *opc*, *por*A, *pilC*, a glutathione peroxidase encoding gene, and a gene involved in the biosynthesis of any one of the polysaccharide capsule, rotamase, IgA protease, pilin, a protein which binds trasferrin or lactoferrin or an opacity protein.

REMARKS

The Interview with the Examiner on January 28, 2003, is acknowledged, with appreciation.

Claims 33-64 have been canceled, without prejudice. Claims 65-105 are pending. No new matter has been added.

An early and favorable Action on the merits of the claimed invention is requested.

Attached is a Table identifying the clones of the specification as they correspond to the sequence identifiers, as requested by the Examiner during the Interview.

The Interview Summary is an accurate reflection of the issues discussed.